

CLAIMS

What is claimed is:

1. A storage container for housing bits comprising:

a front housing portion and a rear housing portion pivotally connected through a hinge for moving between open and closed positions, said front housing portion and said rear housing portion defining a body cavity therebetween in said closed position;

a plurality of bit holders pivotally connected to said hinge and arranged to fit within said body cavity in said closed position, said plurality of bit holders each including a plurality of bit receiving portions formed thereon for accepting the bits, said plurality of bit receiving portions being generally parallel to an axis of said hinge; and

a retaining member extending from one of said first and second housing portions into said body cavity, said retaining member adapted to extend adjacent to predetermined bits of at least one of said plurality of bit holders to preclude movement of said predetermined drill bits out of said bit receiving while in said closed position.

2. The storage container of claim 1 wherein said plurality of bit holders includes a front bit holder lying adjacent to said front housing portion in said closed position and a rear bit holder lying adjacent to said rear housing portion in said closed position.

3. The storage container of claim 2 wherein said front bit holder extends upward a first distance from a bottom of said body cavity and said rear bit holder extends upward a second distance from said bottom of said body cavity, said second distance being greater than said first distance.

4. The storage container of claim 3 wherein said plurality of bit holders further includes at least one intermediate bit holder extending upward from a bottom of said body cavity a third distance, said third distance being less than said second distance and greater than said first distance.

5. The storage container of claim 1 wherein said plurality of bit holders are further defined by a plurality of frames pivotally coupled at said hinge, each of said plurality of frames carrying a sleeve thereon, said sleeve having said plurality of apertures arranged thereon.

6. The storage container of claim 5 wherein said frames each include ridges incorporated on side faces thereof, said side faces facing lateral to and opposite said hinge.

7. The storage container of claim 1 wherein each of the bits engage a bottom surface of said plurality of bit receiving portions in said bit holders, said bottom surface being perpendicular to said hinge.

8. The storage container of claim 7 wherein said retaining member extends at an angle with respect to a bottom of said body cavity to accommodate a series of said predetermined bits having increased height, said retaining member extending substantially parallel to the tips of said series of bits.

9. The storage container of claim 5 wherein said sleeves are comprised of a metallic material.

10. The storage container of claim 5 wherein said plurality of frames are comprised of rigid plastic.

11. The storage container of claim 1 wherein said front housing portion includes an opening portion incorporated therein for viewing the bits.

12. A storage container for housing bits therein, said container comprising:
a front housing portion and a rear housing portion pivotally connected through a hinge for moving between open and closed positions, said front housing portion and said rear housing portion defining a body cavity therebetween in said closed position; and

a plurality of bit holders pivotally connected to said hinge and arranged to fit within said body cavity in said closed position, said plurality of bit holders each including a plurality of bit receiving portions formed thereon for accepting the bits;

wherein said plurality of bit holders include a front bit holder lying adjacent to said front housing in said closed position, a rear bit holder lying adjacent to said rear housing in said closed position, and a middle bit holder disposed between said front and rear bit holders, said front, rear and middle bit holders each including at least two hinge arms respectively cooperating with said hinge, said hinge arms of said front bit holder extending in a laterally offset direction from said hinge arms of said rear bit holder.

13. The storage container of claim 12 wherein said front and rear housing portions include cutouts for accommodating said hinge arms of said front, middle and rear bit holders.

14. The storage container of claim 12 wherein said front bit holder extends upward a first distance from a bottom of said body cavity and said rear bit holder extends upward a second distance from said bottom of said body cavity, said second distance being greater than said first distance.

15. The storage container of claim 14 wherein said middle bit holder extends upward from a bottom of said body cavity a third distance, said third distance being less than said second distance and greater than said first distance.

16. The storage container of claim 12 wherein said plurality of bit holders are further defined by a plurality of frames pivotally coupled at said hinge, each of said plurality of frames carrying a sleeve thereon, said sleeve having said plurality of bit receiving portions arranged thereon.

17. The storage container of claim 16 wherein said sleeves are comprised of a metallic material.

18. The storage container of claim 17 wherein said frames are comprised of rigid plastic.

19. A storage container for housing bits therein, said container comprising:
a front housing portion and a rear housing portion pivotally connected through a hinge for moving between open and closed positions, said front housing portion and said rear housing portion defining a body cavity therebetween in said closed position; and

a plurality of bit holders pivotally connected to said hinge and arranged to fit within said body cavity in said closed position, said plurality of bit holders each including a plurality of bit receiving portions formed thereon for accepting the bits;

wherein said plurality of bit holders include laterally extending ridges formed on a side opposite from said hinge, said ridges facilitating a gripping action on said bit holders for rotating said bit holders about said hinge.

20. The storage container of claim 19 wherein said plurality of bit holders are further defined by a plurality of frames pivotally coupled at said hinge, each of said plurality of frames carrying a sleeve thereon, said sleeve having said plurality of bit receiving portions arranged therein, said plurality of frames including at least two hinge arms respectively cooperating with said hinge, said hinge arms of a first frame laterally offset on said hinge from hinge arms from an adjacent frame.

21. A storage container for housing bits comprising:

a front housing portion and a rear housing portion pivotally connected through a hinge for moving between open and closed positions, said front housing portion and said rear housing portion defining a body cavity therebetween in said closed position, at least one of said front and rear housing portions including an inwardly extending ledge; and

at least one bit holder pivotally connected to said hinge and arranged to fit within said body cavity in said closed position, said at least one bit holder including a foot portion, wherein said foot portion of said at least one bit holder overhangs said ledge, said ledge cooperating with said foot portion to inhibit physical deflection of said at least one bit holder in a direction toward said ledge.

22. The storage container of claim 21 wherein said ledge includes a front ledge extending from said front housing portion and a rear ledge extending from rear housing portion.

23. The storage container of claim 22 wherein said at least one bit holder includes a front bit holder lying adjacent to said front housing portion in said closed position and a rear bit holder lying adjacent to said rear housing portion in said closed position.

24. The storage container of claim 23 wherein said front bit holder includes a foot portion for cooperating with said front ledge of said front housing portion.

25. The storage container of claim 23 wherein said rear bit holder includes a foot portion for cooperating with said rear ledge of said rear housing portion.

26. The storage container of claim 23 further comprising an intermediate bit holder disposed between said front bit holder and said rear bit holder, said intermediate bit holder including a foot portion for cooperating with at least one of said front ledge and said rear ledge.

27. A storage container for housing bits comprising:

a front housing portion and a rear housing portion pivotally connected through a hinge for moving between open and closed positions, said front housing portion and said rear housing portion defining a body cavity therebetween in said closed position; and

a bit holder having an outer sleeve coupled to and supported by a frame portion said bit holder pivotally disposed within said body cavity and including bit receiving portions formed therein for accepting the bits, at least one of said bit receiving portions defined by a first radial support member formed on said frame portion defining an outer boundary of said at least one of said bit receiving portions, said first radial support member having a predetermined height;

wherein said predetermined height is less than a height of a bit accepted therewithin.

28. The storage container for housing bits of claim 27 wherein said at least one of said bit receiving portions defines a circumferential boundary, said first radial support member including a first radial wall portion extending around a first partial circumference of said circumferential boundary.

29. The storage container for housing bits of claim 28 further including a second radial support member including a second radial wall portion extending around a second partial circumference of said circumferential boundary, said second partial circumference unbounded by said first partial circumference.

30. The storage container of claim 29 wherein said first and second radial support members are axially offset from each other.

31. A storage container for housing bits comprising:

a front housing portion and a rear housing portion pivotally connected through a hinge for moving between open and closed positions, said front housing portion and said rear housing portion defining a body cavity therebetween in said closed position; and

a plurality of bit holders pivotally connected to said hinge and arranged to fit within said body cavity in said closed position, said plurality of bit holders including bit receiving portions formed therein for accepting bits, each of said plurality of bit holders having a front side for facing said front housing portion and a rear side for facing said rear housing portion;

wherein bit size identifiers are disposed on said front and rear side of said plurality of bit holders proximate each of said bore portions.

32. The storage container of claim 31 wherein said plurality of bit holders includes a front bit holder lying adjacent to said front housing portion in said closed position and a rear bit holder lying adjacent to said rear housing portion in said closed position and an intermediate bit holder disposed between said front and rear bit holder;

wherein said front bit holder extends upward a first distance from a bottom of said body cavity and said rear bit holder extends upward a second distance from said bottom of said body cavity and said intermediate bit holder extends upward a third distance from said bottom, said third distance being less than said second distance and greater than said first distance.

33. The storage container of claim 32 wherein said bit identifiers of said intermediate bit holder are disposed on said intermediate bit holder at a fourth distance from said bottom, said fourth distance is greater than said first distance thereby allowing view of said bit identifiers on said front face of said intermediate bit holder above said front bit holder.

34. The storage container of claim 32 wherein said bit identifiers of said rear bit holder are disposed on said rear bit holder at a fifth distance from said bottom, said fifth distance greater than said third distance thereby allowing view of said bit identifiers on said front face of said rear bit holder above said intermediate bit holder.

35. A storage container for housing bits comprising:

a front housing portion and a rear housing portion pivotally connected through a hinge for moving between open and closed positions, said front housing portion and said rear housing portion defining a body cavity therebetween in said closed position; and

a latch rotatably coupled to one of said front and rear housing portions and moveable between an open and closed position;

wherein said latch includes a shoulder extending therefrom for engaging said one of said front and rear housing portion to preclude rotation of said latch into a position which would impede rotation of said front and rear housing portions into said closed position.

36. A storage container for housing bits comprising:

a front housing portion having a bottom face connected to a top face by a hinge face; and

a rear housing portion having a bottom face connected to a top face by a hinge face, said hinge face of said front housing portion pivotally connected to said hinge face of said rear housing portion at a hinge and moveable between open and closed positions, said hinge faces having structure defining a first common plane in said closed position and said bottom faces having structure defining a second common plane;

whereby the container is moveable between respective free standing conditions on each of said first and second common planes.

37. The storage container of claim 36 wherein said hinge face of said front housing portion and said hinge face of said rear housing portion include inset and outset portions formed thereon, said outset portions of said respective hinge faces defining said first common plane.

38. The storage container of claim 37 wherein said outset portions of said respective hinge faces interfit with said inset portions of said respective hinge faces when the container is in a fully open position.

39. A storage container for housing bits comprising:
a front housing portion and a rear housing portion pivotally connected through a hinge for moving between open and closed positions, said front housing portion and said rear housing portion defining a body cavity therebetween in said closed position; and

a plurality of bit holders pivotally connected to said hinge and arranged to fit between said front and rear housing portion, each of said plurality of bit holders having respective bottom surfaces lying on a common plane with bottom surfaces of said front and rear housing portion;

whereby said bottom surfaces of said plurality of bit holders cooperate with said bottom surfaces of said front and rear housing portions to provide free standing support along said common plane as said front and rear housing portions are moved between said open and closed positions.

40. The storage container of claim 39 wherein said plurality of bit holders are independently rotatable about said hinge whereby said respective bottom surfaces present a plurality of support positions along said common plane.